



Installation Manual
TWM Performance
Short Shift Kit – Stage 1 and Stage 2
MazdaSpeed 6

Please Note: It is preferable to park on a flat surface, as you will have to engage and disengage the hand brake and shift from gears to neutral. If you cannot do so and are obliged to install the short shifter on a slightly inclined surface, place wooden blocks in front or behind the wheels to prevent the car from moving while you are working.

Estimated Installation Time: 60 minutes

Tools required:

- Flat head screw driver
- Philips head screw driver
- Flash light
- Needle nose pliers
- 8mm, 10 mm, and 12mm sockets and 10 mm wrench
- All purpose grease (white lithium grease preferred)
- Power drill
- 5 mm Allen key



1. Carefully unscrew the shift knob by rotating it counter-clockwise.



This manual is available for download in color at : www.twmperformance.com



2. Hold the center console near the cup holder beside the handbrake and pull up on it until it unclips.



3. The rear half section of the center console can be unclipped from the front half which surrounds the shifter. To do so, push up on the 2 clips where the 2 pieces join from under the rear half section of the console.



4. The front half of the center console which surrounds the shifter can now be unclipped by pulling up on it. Do not remove it yet as there are some wires beneath it to disconnect.





5. The connector beneath the front half of the center console for the lighter can now be unclipped. The white plastic piece which hoses a lightbulb has 2 screws holding it in place. Use a phillips head screwdriver to remove these screws and separate the white plastic piece from the front of the console. Place both console sections in a safe place.



6. Locate the plastic caps on each side of the center console in front of the front seats. Remove them by inserting an X-acto knife or other sharp tool and pop the cap off. Use a Philips head screwdriver to remove the screws that are exposed once the caps are removed. Place the caps and screws in a safe place for re-installation later.



7. Move both front seats fully forward. Between the front seat back and the end of the center console, you will find two more plastic caps similar to the ones you removed in front. Remove these caps in the same manner as before, and remove the screws. Be careful later during re-installation of these caps as they only fit one way, one tab is bigger than the other.



This manual is available for download in color at : www.twmperformance.com



8. Open the lid at the rear of the center console and remove the foam in the bottom. Remove the 2 screws or 10mm bolts with a Philips screwdriver or 10 mm socket and ratchet with an extension.



9. Remove the 2 screws at the front of the center console with a philips head screwdriver.



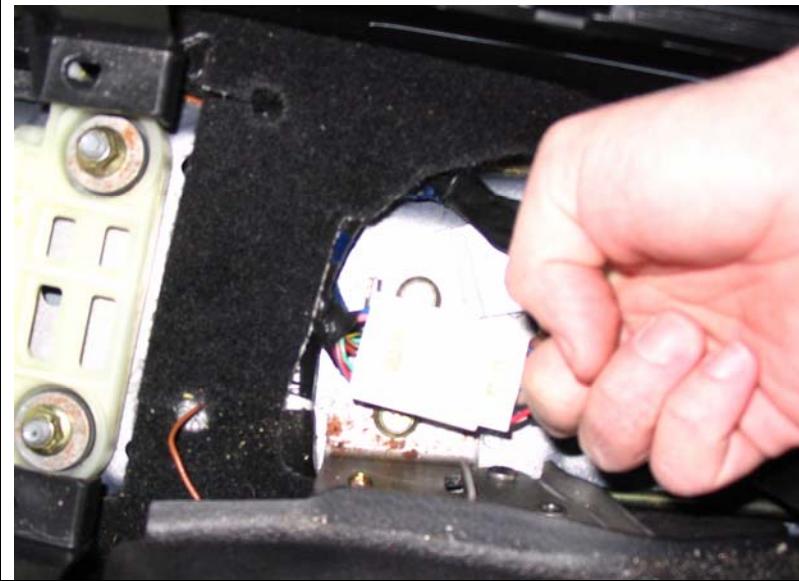
10. Remove the 2 screws on either side of the center console with a philips head screwdriver, these screws are located close to the rear of the shifter assebly.



This manual is available for download in color at : www.twmperformance.com



11. Use needle nose pliers to detach the wiring harness next to the handbrake from the console. The plastic tabs must be depressed while pushing down to pop the clip out of the hole.



12. Unclip the large white connector by sliding one finger beneath it and pressing up on the tab on the underside of the connector. While this tab is depressed, you can pull back on the wiring harness and console slightly to disconnect the harness.



13. You can now remove the entire center console using caution not to scratch any interior components.



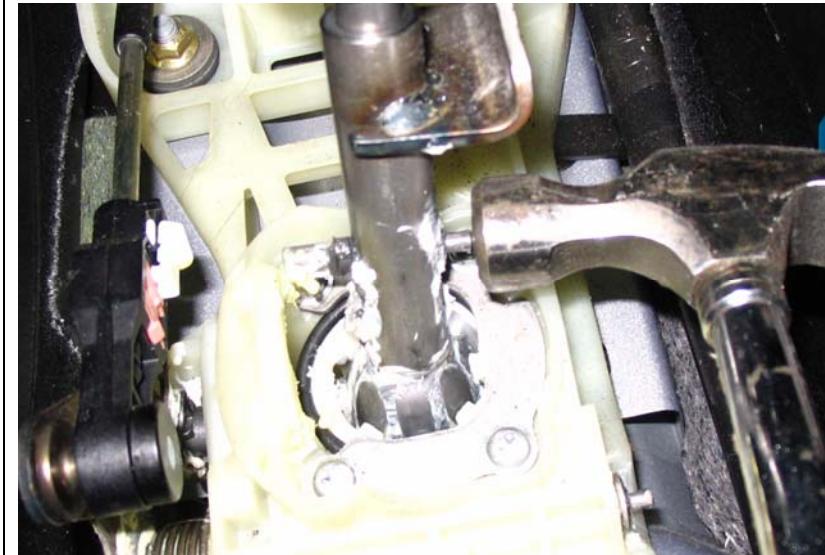


14. Disconnect the shifter cable from the steel plate on the passenger side of the shifter. In order to do so, use a large flat head screwdriver and pop the cable off using the steel plate as an anchor point and the screwdriver as a lever.



15. PLEASE NOTE: The following steps are only to be performed if you have purchased the stage 2 short shifter. If you have purchased the stage 1 short shifter, proceed to step #26.

Remove the clip and washer securing the pin that goes through the shifter by prying with a flat head screwdriver.



16. Remove the pin that passes through the shifter by tapping it out with a hammer. Once the pin is nearly out, you will need to tilt the shifter to the passenger side to allow the pin to be removed completely. **VERY IMPORTANT:** There is a small plastic bushing on the end of the pin on the passenger side, remove it when the pin is nearly out. This bushing is pictured below. Finish removing the pin with needle nose pliers.





17. To the left: Be sure to keep the small plastic guide bushing pictured to the left for re-installation.



18. Slide the upper shaft out of the lower shaft. Remove the black rubber o-ring from the shaft and set aside for re-installation.



19. Slide the black rubber o-ring on to the TWM shifter shaft.



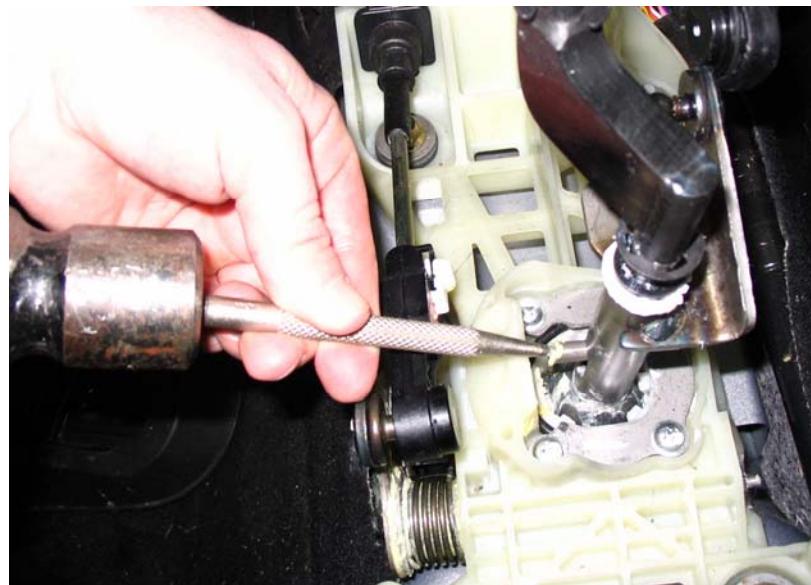
This manual is available for download in color at : www.twmperformance.com



20. Grease the portion of the shaft on the TWM short shifter that slides in to the bottom section of the stock shifter. TWM recommends using white lithium based grease.

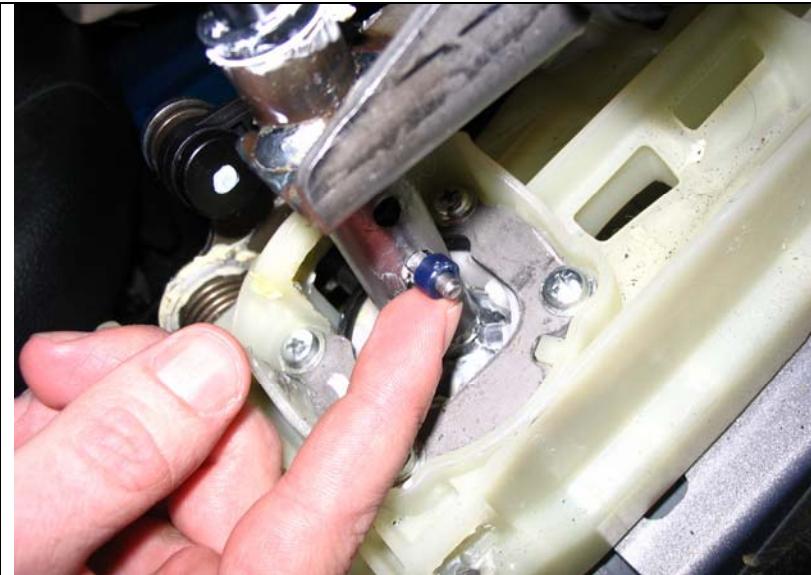


21. Slide the TWM shifter shaft in to the stock bottom shifter shaft. Begin re-inserting the pin that goes through the entire shifter by hand. Slide the pin in to the shifter until it becomes too difficult to press in any further.



22. Complete re-installing the pin with a hammer and punch. This step is simplified with the help of an assistant to hold the shifter half depressed. **USE CAUTION** during this step to ensure that the larger diameter section of the pin does not collide with the edges of the slot in the shifter shaft while it is being tapped in. This could result in rough up and down motion of the shifter while shifting to reverse.

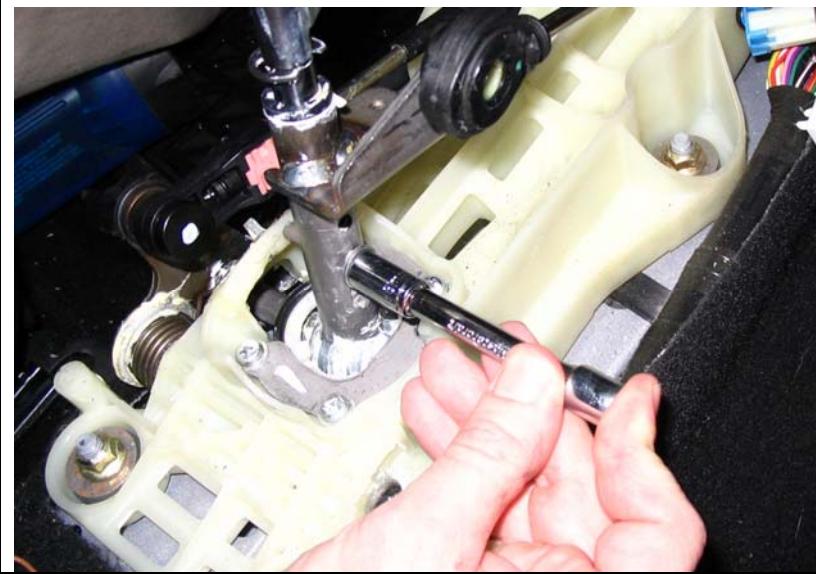




23. Re-install the plastic guide bushing that you removed in step 16 and 17 by sliding it on to the pin and in to the slot in the shifter.



24. Replace the small washer that you removed in step 15 on to the pin.



25. Use an 8mm socket with an extension to replace the push clip that was removed in step 15 with the new clip provided in the kit. Be sure the push clip is pressed all the way on to the shaft.



This manual is available for download in color at : www.twmperformance.com



26. Place the TWM shifter side plate on the stock shifter as shown to the left. There is a punch mark and a hole on the bottom side of the stock shifter side plate that will line up with the holes in the TWM shifter side plate.

**In some cases there is no hole in the horizontal portion of the stock shifter plate. If this is the case you will need to mark the location for the hole and drill a new hole to line up with the hole in the TWM shifter plate.



27. Insert the small silver 8mm bolt with a 5mm washer through the bottom of the TWM short shift side plate and into the threaded hole in the stock shifter plate. Hold the TWM side plate in place so the punch mark in the stock plate is lined up with the small hole on the bottom of the TWM plate. Secure by tightening the bolt with an 8mm socket and ratchet.

**In some cases there is already a bolt in this hole holding an L shaped bracket. It will need to be removed, and may be difficult. It may be removed with a Dremel tool or by drilling it out.



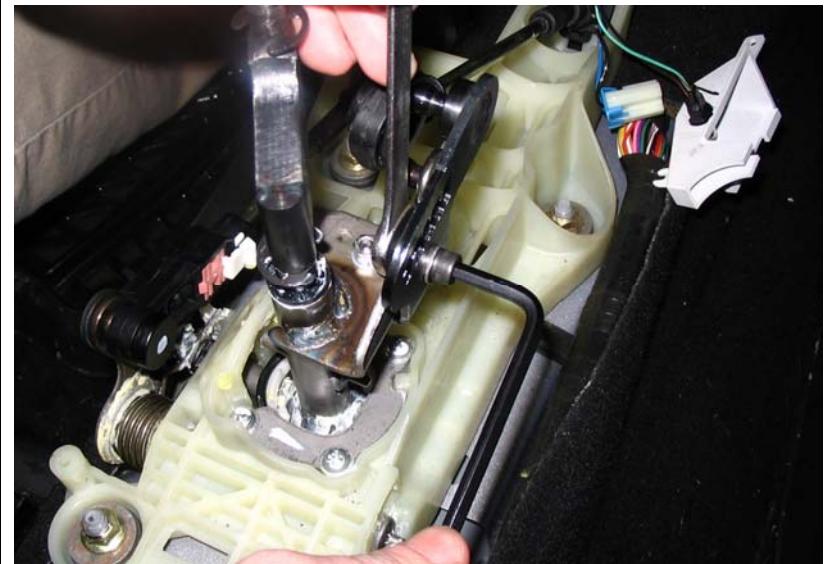
28. Once the bolt has been threaded in all the way, install the 5mm washer, 5mm lock washer, and 5mm nut in that order. The correct stacking order is pictured to the left. Hold the 8mm bolt from below with an 8mm socket or wrench and secure the nut on top with an 8mm socket and ratchet.



This manual is available for download in color at : www.twmperformance.com



29. Place several paper towels or rags around the base of the shifter to protect the shifter main pivot point. Using the existing hole in the TWM side plate as a guide, use a power drill and the drill bit provided to drill through the stock side plate. Remove the rags and all steel shavings being careful not to drop any shavings in to the shift assembly.



30. Insert the provide 6mm socket head cap screw with a washer through the hole you just drilled. Place a washer on the other side of the plate, and thread on the 6mm lock washer provide with the kit. Tighten with a 10 mm wrench and 5mm Allen key to secure the TWM side plate to the existing plate.



31. Pop the shifter cable on to the pivot ball on the TWM shifter side plate, it can be pushed on by hand.



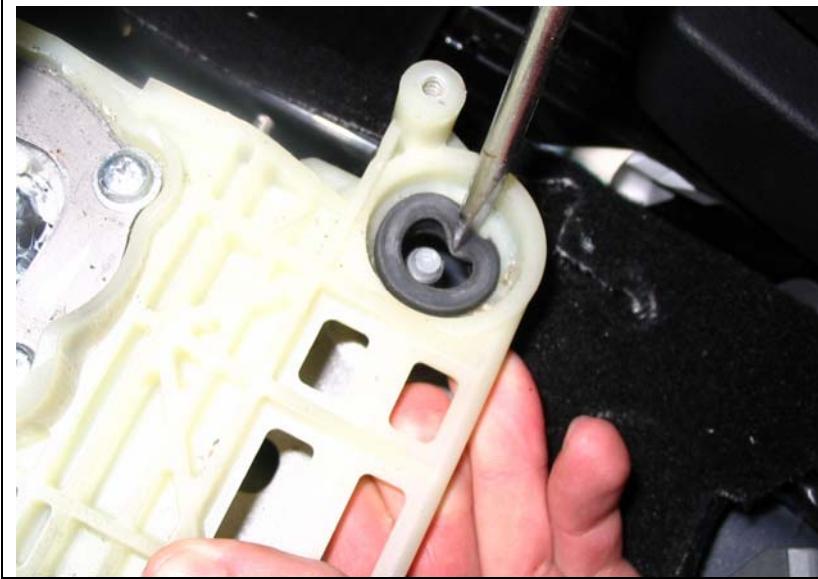


32. Note: Steps 32 to 36 are required only if you purchased the shifter base bushings with your TWM short shifter.

In order to make clear room to remove all the nuts securing the shift assembly, lift the left shifter cable to separate it from the shift assembly and push it aside to be able to access the nut beneath it. Unbolt all 4 nuts and set aside for re-installation.



33. Use a flat head screwdriver and remove all 4 steel sleeves in the rubber bushings. Insert the flat head screwdriver between the steel sleeve and pry it up and out by working you way around it.



34. Remove the rubber bushings on all 4 corners of the shift assembly by pushing them out through the bottom of the assembly with a flat head screwdriver.



This manual is available for download in color at : www.twmperformance.com



35. Place one TWM base bushing with the smaller diameter facing up on each stud beneath each corner of the shift assembly. Place the shift assembly back on top of the bushings and ensure that the smaller diameter of the bushings is properly seated in the holes in the shift assembly.



36. Place one M8 x 24 washer on top of the shift assembly above the bushings and secure with the stock nuts. Repeat at all 4 corners of the shift assembly.



37. Re-install the console, connect all wires and replace all screws, reversing steps 1 to 13.



This manual is available for download in color at : www.twmperformance.com



38. Enjoy the ride!

Legal Disclaimer

TWM Performance is not responsible for the misuse, incorrect installation, or failure of any product we sell.

Under no circumstances, including but not limited to negligence, will TWM Performance be liable for special or consequential damages that result from the use or inability to use our products.

TWM Performance does not assume responsibility for any damage to the user, passenger or vehicle resulting from the operation of a TWM Performance product.

TO PROTECT USERS FROM INJURY OR DEATH. THE USER ASSUMES ALL RISKS.

Autocrossing, track events, and high speed driving are all dangerous activities - always drive responsibly and safely.

Warranty

Installation of some TWM Performance products may or may not void factory warranties. Always keep OEM equipment that has been replaced in case work is required at the dealer or the vehicle is sold.

This warranty covers the **original purchasing consumer**. This warranty is limited to repair or replacement by TWM Performance of any TWM Performance product that fails because of a defect in materials or workmanship.

Warranty does not cover the following:

- Damage incurred to related vehicle components
- Regular day to day wear on vehicle
- Shipping costs for replacements
- Installation costs and vehicle down time
- Products that have been modified, incorrectly installed or misused.
- Mounting hardware and bearings



This manual is available for download in color at : www.twmperformance.com